



#80300

Docket No. 62574-A/JPW/GJG

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ulrich Laemmlli and Samuel Janssen  
Serial No. : 09/903,359  
Filed : July 11, 2001  
For : LINKED, SEQUENCE-SPECIFIC DNA BINDING  
MOLECULES

1185 Avenue of the Americas  
New York, New York 10036  
April 5, 2002

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. §1.56 and § 1.97(a)-(b) applicants would like to direct the Examiner's attention to the following reference which is listed on the attached Form PTO-1449 (**Exhibit 1**) and attached hereto as **Exhibits 2-23**:

1. Beerman, T.A., Woynarowski, J.M., Sigmund, R.D., Gawron, L.S., Rao, K.E., and Lown, J.W., "Netropsin and bis-netropsin analogs as inhibitors of the catalytic activity of mammalian DNA topoisomerase II and topoisomerase cleavable complexes", (1991), *Biochimica et Biophysica Acta*, 1090: 52-60. (**Exhibit 2**);
2. Baird, Eldon E. and Dervan, Peter B., "Solid Phase Synthesis of Polyamides Containing Imidazole and Pyrrole Amino Acids", (1996), *J. Am. Chem. Soc.*, 118: 6141-6146. (**Exhibit 3**);

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3. Platero, J.S., Csink, A.K., Quintanilla A., and Henikoff, S., "Changes in Chromosomal Localization of Heterochromatin-binding Proteins during the Cell Cycle in *Drosophila*", (1998), *The Journal of Cell Biology*, 140: 1297-1306; **(Exhibit 4)**;
4. Martello, Pamela A., Bruzik, J.P., deHaseth, P., Youngquist, R.S., and Dervan, P. B., "Specific Activation of Open Complex Formation at an *Escherichia coli* Promoter by Oligo (*N*-methylpyrrololecarboxamide)s: Effects of Peptide Length and Identification of DNA Target Sites", (1989), *Biochemistry*, 28: 4455-4461. **(Exhibit 5)**;
5. Yanagi, K., Prive, G.G., and Dickerson, R.E., "Analysis of Local Helix Geometry in Three *B*-DNA Decamers and Eight Dodecamers", (1991), *J. Mol. Biol.*, 217: 201-214. **(Exhibit 6)**;
6. Wang, Wuyi and Lown, J. William, "Anti-HIV-I Activity of Linked Lexitropsins", (1992), *J. Med. Chem.*, 35: 2890-2897. **(Exhibit 7)**;
7. Kielkopf, Clara L., White, S., Szewczyk, J.W., Turner, J.M., Baird, E.E., Dervan, P.B., and Rees, D.C., "A Structural Basis for Recognition of A-T and T-A Base Pairs in the Minor Groove of B-DNA", (1998) *Science*, 282: 111-115. **(Exhibit 8)**;
8. Geierstanger, Bernhard H., Mrksich, M., Dervan, P.B., and Wemmer, D.E., "Design of a G-C--Specific DNA Minor Groove-Binding Peptide", (1994) *Science*, 266: 646-648. **(Exhibit 9)**;

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9. Gottesfeld, Joel M., Neely, L., Trauger, J.W., Baird, E.E., and Dervan, P.B., "Regulation of gene expression by small molecules", (1997) *Science*, 387: 202-205. **(Exhibit 10);**
10. Lammamie de Clairac, Rafael, P., Seel, C.J. Geierstanger, Mrkish, M., Baird, E.E., Dervan, P.B., and Wemmer, D.E., "NMR Characterization of the Aliphatic  $\beta/\beta$  Pairing for Recognition of A-T/T-A Base Pairs in the Minor Groove of DNA", (1999) *J. Am. Chem. Soc.*, 121: 2956-2964. **(Exhibit 11);**
11. Henikoff, Steven, "Heterochromatin function in complex genomes", (2000) *Biochimica et Biophysica Acta*, 1470: 01-08. **(Exhibit 12);**
12. Lohe, Allan R., Hilliker, A.J., Roberts, P.A., "Mapping Simple Repeated DNA Sequences in Heterochromatin of *Drosophila melanogaster*", (1993) *Genetics*, 134: 1149-1174. **(Exhibit 13);**
13. McBryant, Steven J., Baird, E.E., Trauger, J.W., Dervan, P.B., and Gottesfeld, J.M., "Minor Groove DNA-Protein Contacts Upstream of a tRNA Gene Detected with a Synthetic DNA Binding Ligand", (1999) *J. Mol. Biol.*, 286: 973-981. **(Exhibit 14);**
14. Turner, James M., Swalley, S.E., Baird, E.E., and Dervan, P.B., "Aliphatic/Aromatic Amino Acid Pairings for Polyamide Recognition in the Minor Groove of DNA", (1998) *J. Am. Chem. Soc.*, 120: 6219-6226. **(Exhibit 15);**
15. Youngquist, R.S., and Dervan, P.B., "A Synthetic Peptide Binds 16 Base Pairs of A, T Double Helical DNA", (1987) *J.*

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*Am. Chem. Soc.*, 109: 7564-7566. **(Exhibit 16);**

16. Turner, James M., Baird, E.E., and Dervan, P.B., "Recognition of Seven Base Pair Sequences in the Minor Groove of DNA by Ten-Ring Pyrrole-Imidazole Polyamide Hairpins", (1997) *J. Am. Chem. Soc.*, 119: 7636-7644. **(Exhibit 17);**
17. Youngquist R.S., and Dervan, P.B., "Sequence-specific recognition of B-DNA by oligo (N-methylpyrrolicarboxamide)s" (1985) *Biochemistry*, 82: 2565-2569. **(Exhibit 18);**
18. Pelton, J.P., and Wemmer, D.E., "Structural characterization of a 2:1 distamycin A-d (CGCAAATTGGC) complex by two-dimensional NMR" (1989) *Biochemistry*, 86: 5723-5727. **(Exhibit 19);**
19. Omichinski, James G., Pedone, P.V., Felsenfeld, G., Gronenborn, A.M., Clore, G.M., "The solution structure of a specific GAGA factor-DNA complex reveals a modular binding mode" (1997) *nature structural biology*, 4(2): 122-132. **(Exhibit 20);**
20. Neamati, Nouri, Mazumder, A., Sunder, S., Owen, J.M., Tandon, M., Lown J.W., Pommier, Y., "Highly Potent Synthetic Polyamides, Bisdistamycins, and Lexitropsins as Inhibitors of Human Immunodeficiency Virus Type 1 Integrase" (1998) *Molecular Pharmacology*, 54: 280-290. **(Exhibit 21);**
21. Csink Amy, K., and Henikoff, Steven, "Genetic modification of heterochromatic association and nuclear organization in

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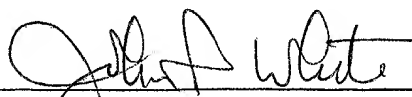
*Drosophila*" (1996) *Nature*, 381: 529-531. **(Exhibit 22)**;

22. White, Sarah, Baird, E.E. and Dervan, P.B., "On the Pairing rules for recognition in the minor groove of DNA by pyrrole-imidazole polyamides" (1997) *Chemistry & Biology*, 4(8): 569-578. **(Exhibit 23)**.

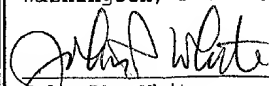
If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone at the number provided below.

No fee is deemed necessary in connection with the filing of this Information Disclosure Statement. If any such fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents Washington, D.C. 20231.	
	4/5/02
John P. White	Date
Reg. No. 28,678	